

REMARKS/ARGUMENTS

Claims 1, 3-6, and 8-22 are pending.

Claims 2 and 7 have been cancelled.

Applicants wish to thank the Examiner for the meeting with the undersigned on August 28, 2007. The subject of the meeting included the prior art rejections in view of the proposed arguments. The Examiner expressed willfulness to reconsider the rejection in view of the presented arguments. The Examiner also indicated that the rejection of claims 16 and 20 over Hahnfeld will be likely withdrawn.

The rejection of Claims 1, 3-6, and 8-22 under 35 U.S.C. 102(b) over Brunner, US 6,284,917, is untenable because Brunner does not disclose a support material having over 90% of the total pore volume of meso- and micropores with a diameter from 0.1 to 50 nm.

The claimed catalyst comprises at least one metal on a support material, wherein the support material has an average pore diameter of 25-50 nm and a surface area greater than 30 m<sup>2</sup>/g, wherein over 90% of the total pore volume of the support materials is comprised of meso- and micropores with a diameter of 0.1-50 nm. The specification defines pores having a diameter smaller than 2 nm as micropores, a diameter from 2 to 50 nm as mesopores, and a diameter greater than 50 nm as macropores (see page 4). As discussed in the specification, the claimed catalyst with meso and micropores surprisingly possess improved activity, selectivity, stability, and hydrogenates aromatic carboxylic acids without significant side reactions (see pages 3-5).

Brunner's catalyst 2 consists of two components: 1) 5-50% by weight of macropores having a diameter 50-10,000 nm and 2) 50-95% by weight of mesopores having a diameter from about 2 to about 50 nm (col. 6, lines 1-13). In each case, the sum of the pore volumes, i.e., (1) macro and (2) mesopores, adds up to 100%. The the Brunner's disclosure shows that "about 2 nm to about 50 nm" means "from 2 to 50 nm" (see col. 2, line 36; col. 2, lines 60-

61; examples at col. 12, line 38; claims 1 and 3). Nowhere Brunner describes a support comprising micropores having a diameter less than 2 nm. Thus, Brunner does not anticipate the claimed catalyst.

Also, Brunner does not describe a support having over 90% of the total pore volume of the support materials is comprised of meso- and micropores with a diameter of 0.1-20 nm as claimed in claims 16 and 20. Applicants request that this rejection be withdrawn.

Claims 1, 3 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hahnfeld, US 6,350,82.

Hahnfeld does not describe a catalyst for hydrogenating aromatic compounds to give the corresponding alicyclic polycarboxylic acids or esters, wherein a support material has over 90% of meso- and micropores with a diameter 0.1 to 50 nm, as claimed in claims 1-6, 8-15, 17-19, and 21-22. Hahnfeld also does not describe a support having over 90% of meso- and micropores with a diameter 0.1 to 20 nm, as claimed in claims 16 and 20.

The claimed inventions relates to the hydrogenation of aromatic compounds, e.g., alicyclic polycarboxylic acids or esters, by ring hydrogenation of the corresponding aromatic compounds (page 1). These compounds may be used as plastisizers in plastics (e.g., PVC and copolymers based on vinyl acetate, page 15).

Hahnfeld describes hydrogenating block copolymers (i.e., polymers having high molecular weight) produced from a vinyl aromatic monomers and a conjugated diene monomers (col. 1-2 and col. 3, lines 13-46, col. 6, lines 17-29, col. 14-15, Examples, claim 1). Hahnfeld describes a support having a narrow pore size distribution wherein at least 98% of the pore volume is defined by pores having a diameter greater than 30 nm and less than 2 % of the pore having a diameter less 30 nm.

Hahnfeld describes a wide range of pore diameters (less than 30 nm) for less than 2% of pores. However Hahnfel does not describe a support comprising pores with a diameter less

than 2 nm with "sufficient specificity" to anticipate the claimed support comprising micropores (i.e., a diameter less than 2 nm). MPEP § 2131.03. In fact, it is likely that the structure of pores of the support material for hydrogenating the Hahnfeld long block copolymers and the short claimed aromatic compounds is different, wherein the presence of micropores is undesirable in the Hahnfeld support.

Further, Hahnfeld does not describe a support having over 90% of pores with a diameter 0.1-20 nm, as claimed in claimed 16 and 20, because the Hahnfeld support has less than 2% of pores with a diameter less than 30 nm.

Thus, Hahnfeld does not anticipate the claimed catalyst. Applicants request that this rejection be withdrawn.

A Notice of Allowance for all pending claims is requested.


Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 08/07)

  
Marina I. Miller, Ph.D.  
Registration No. 59,091